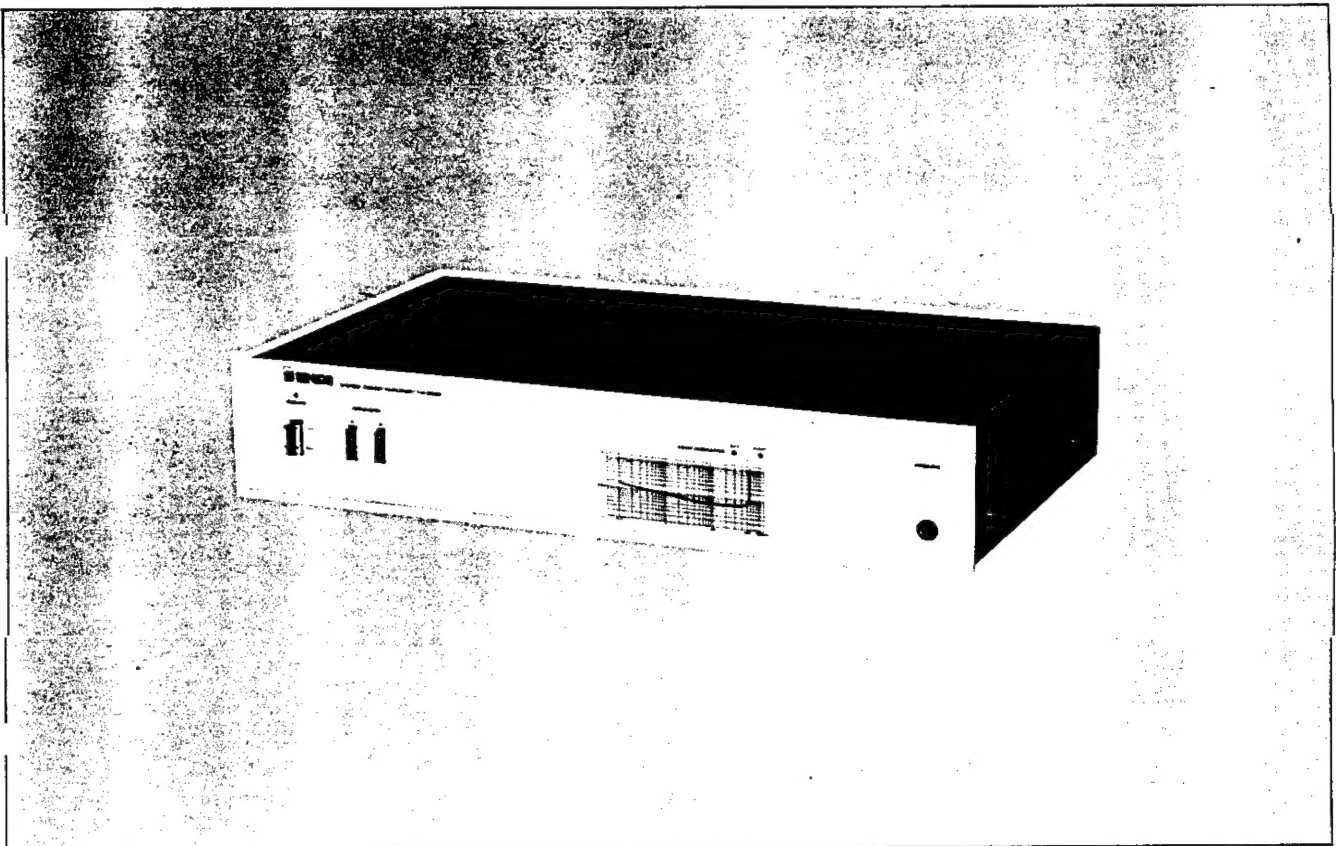


# Service Manual

**Stereo Power Amplifier**

**MODEL TM2550**



# 1. SPECIFICATIONS

Power Output . . . . . 50 Watts per channel at 4 ohms  
from 20 to 20,000 Hz, both  
channels driven 0.08% T.H.D.  
Damping Factor at 1 kHz 4 ohms . . . . . 30  
Frequency Response (−1.5 dB) . . . . . 5 to 60 Hz

Signal to Noise Ratio (IHF-A) . . . . . 110 dB  
Power Supply . . . . . ~ AC 220/240 Volts 50 Hz  
Dimensions . . . . . 430(W) x 80(H) x 250(D) mm  
Weight . . . . . 6.8 kg

Subject to change without notice.

## 2. DISASSEMBLY INSTRUCTIONS

- (1) **Top cover removal**  
Remove four screws on the both sides of the set and lift up the top cover.
- (2) **Bottom cover removal**  
Remove a screw on the center of the bottom cover and lift the bottom cover.
- (3) **Front panel removal**  
Remove six screws (A) from the top and bottom as shown in Figures 1 and 2, and the front panel with push buttons can be removed.

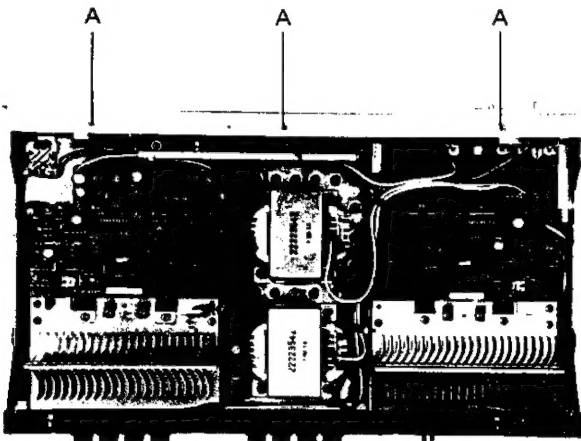


Figure 1

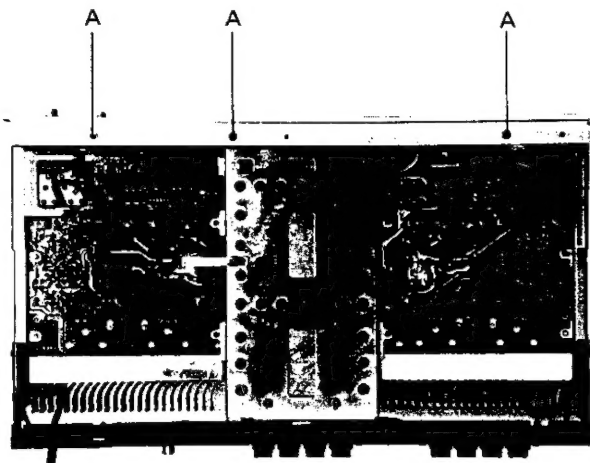


Figure 2

## 3. ALIGNMENT INSTRUCTIONS

### IDLE CURRENT

#### TEST EQUIPMENTS

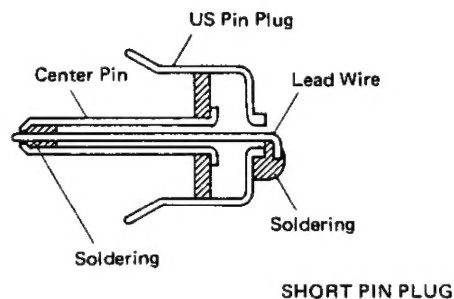
- (1) VTVM (DC).
- (2) Short pin plugs (Accessories of pre-amplifier or Figure).

#### NOTE:

- (1) Align after five minutes when power has been supplied.

#### ALIGNMENT (For alignment point, See Figure 5.)

- (1) Connect test equipments as shown in Figure 3.
- (2) Short the input terminal with short pin plugs.
- (3) Adjust the SVR501 (L ch), and SVR502 (R ch) as the VTVM indicates  $16.5 \pm 3\text{mV DC}$ .



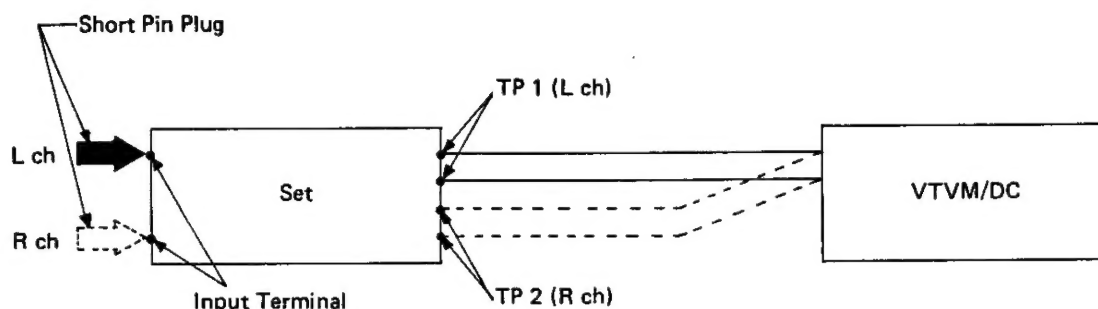


Figure 3

## PEAK INDICATION

### TEST EQUIPMENT

- (1) AF oscillator
- (2) VTVM (AC).
- (3) Dummy loads (4 ohms above 250W).

### NOTE:

- (1) Don't short the speaker terminals.

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TEL: 01844 - 351694  
FAX: 01844 - 352554

### ALIGNMENT (For alignment point, See Figures 5 and 6.)

- (1) Set the speaker selectors to SPEAKER A position.
- (2) Connect test equipment as shown in Figure 4.
- (3) Adjust the SVR701 (L ch) or SVR702 (R ch) to turn on the peak indicator at 14.14V (50W) on VTVM.

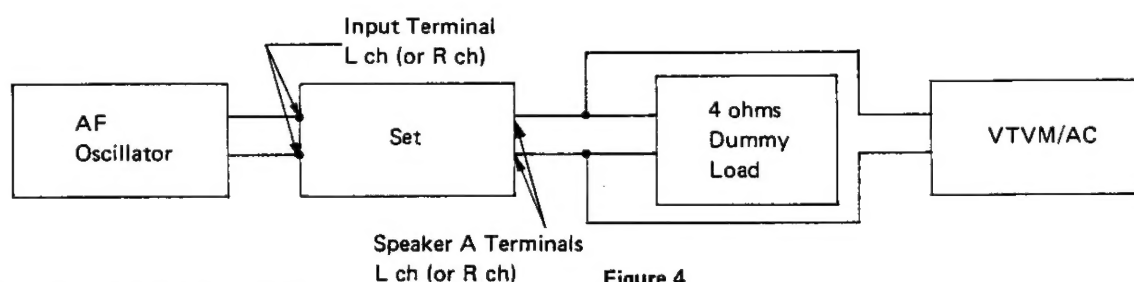


Figure 4

## ALIGNMENT POINTS

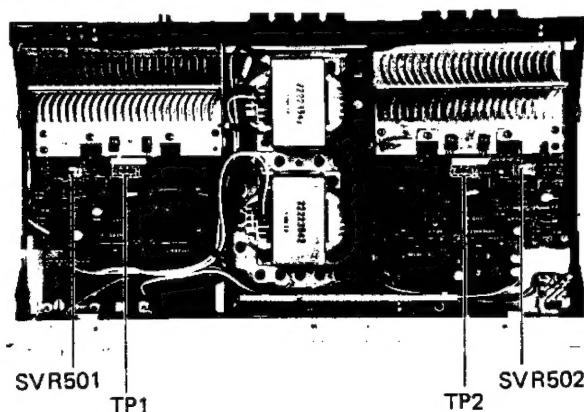


Figure 5

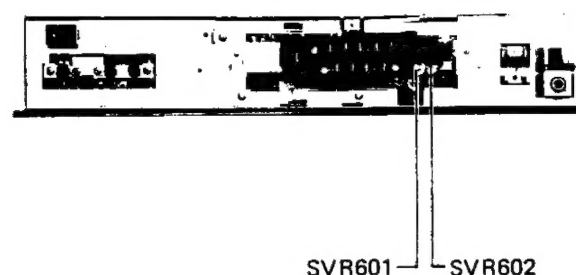
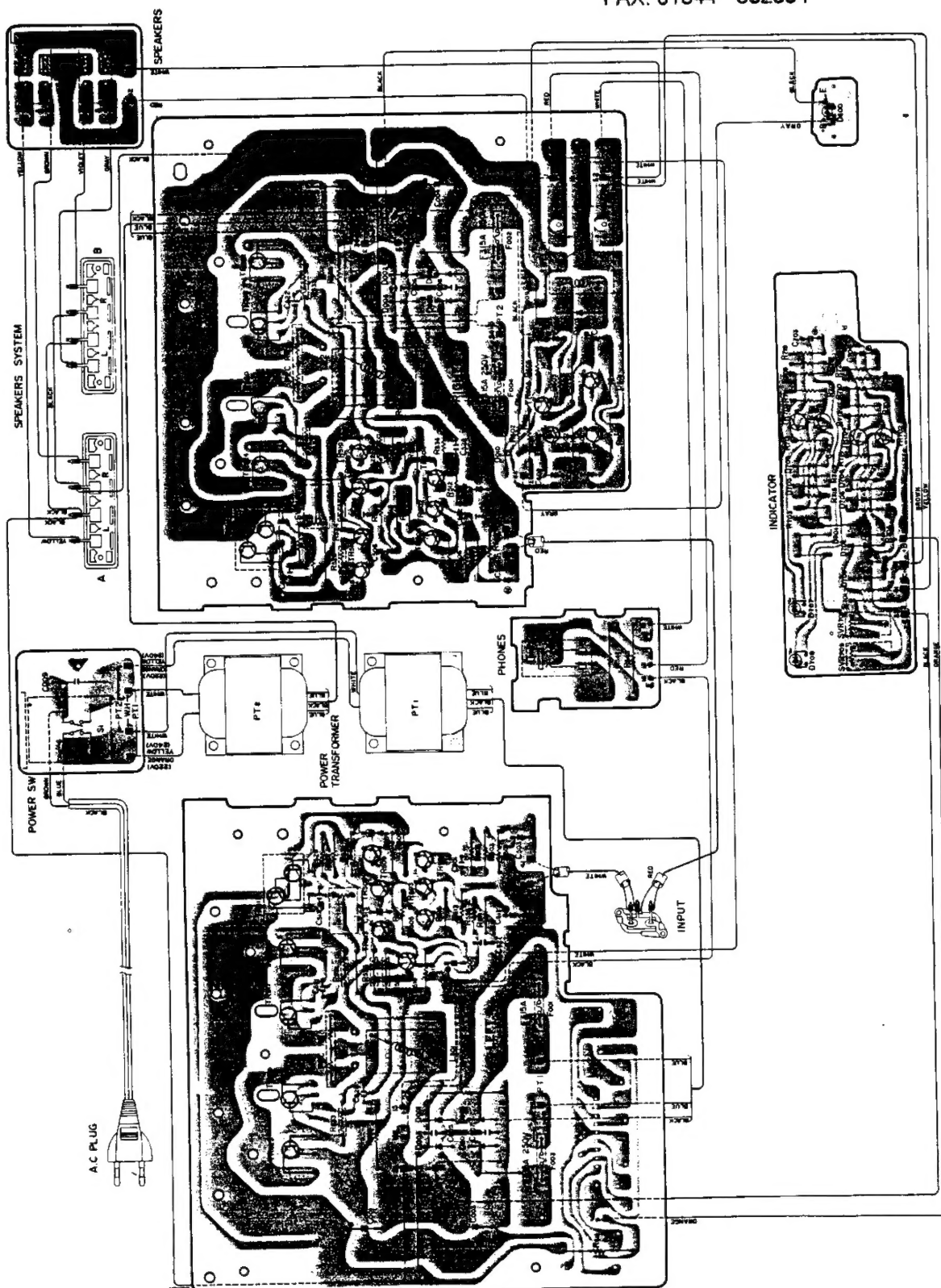


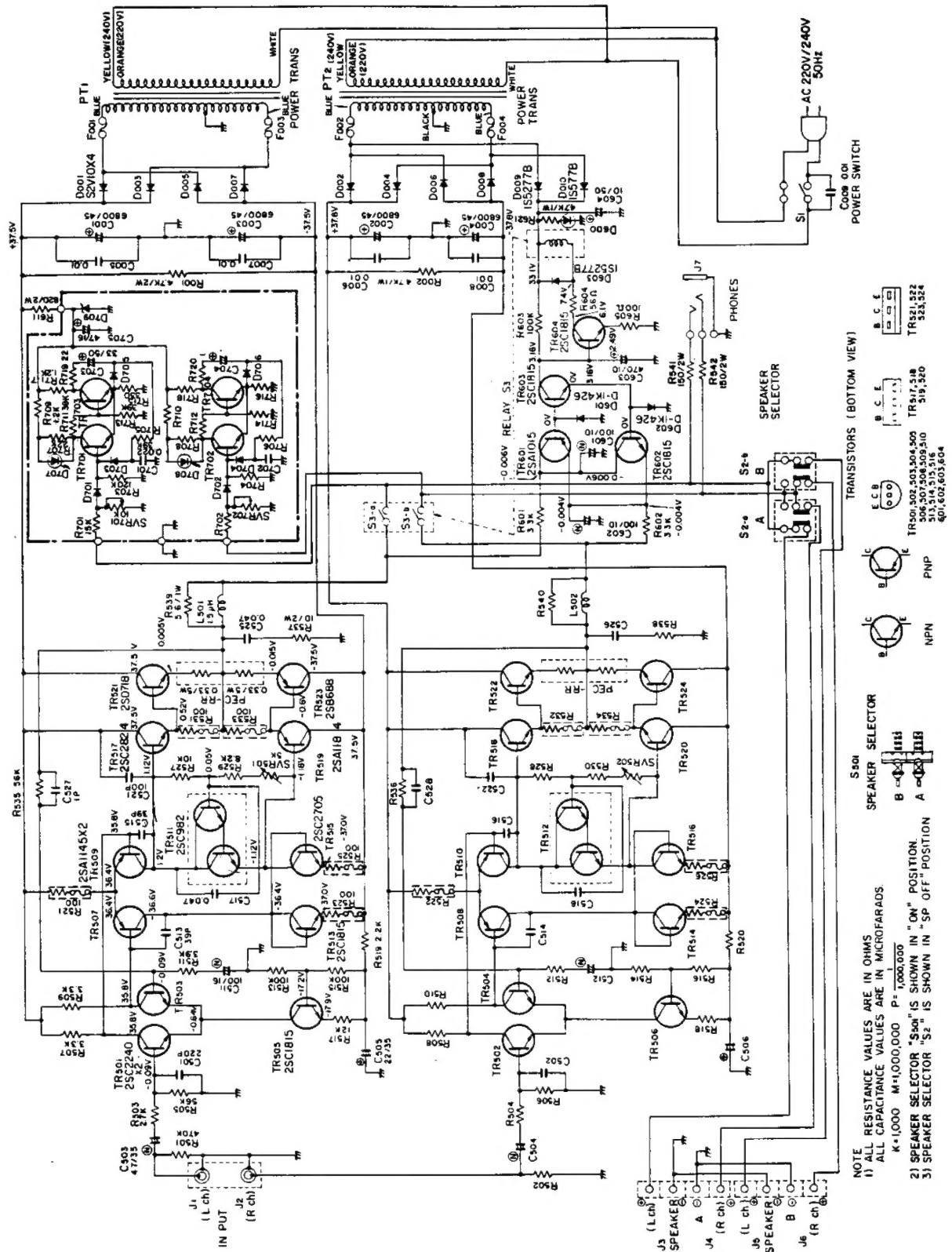
Figure 6

## 4. PRINTED CIRCUIT BOARD BOTTOM VIEW AND WIRING

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## 5. SCHEMATIC DIAGRAM



## 6. EXPLODED VIEW AND PARTS LIST

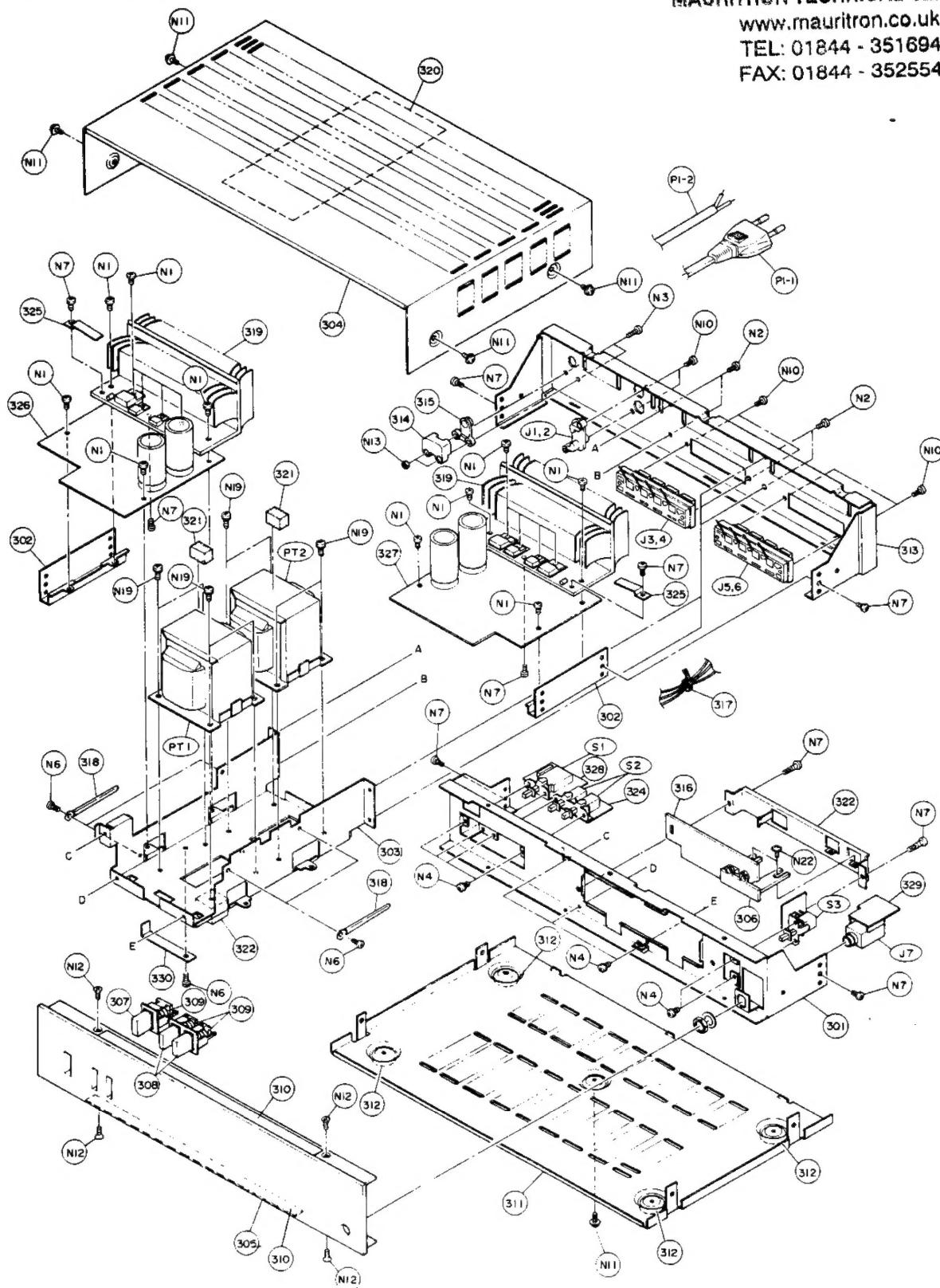
### EXPLODED VIEW

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**PARTS LIST**  
**ELECTRICAL PARTS**

Symbol No.	Part No.	Description
<b>TRANSISTORS &amp; DIODES</b>		
Symbol No. with TR: Transistor Symbol No. with D: Diode		
TR501	36325846	2SC2240-BL1
TR502	36325846	2SC2240-BL1
TR503	36325846	2SC2240-BL1
TR504	36325846	2SC2240-BL1
or		
TR501	36325847	2SC2240-BL2
TR502	36325847	2SC2240-BL2
TR503	36325847	2SC2240-BL2
TR504	36325847	2SC2240-BL2
or		
TR501	36325848	2SC2240-FL3
TR502	36325848	2SC2240-BL3
TR503	36325848	2SC2240-BL3
TR504	36325858	2SC2240-BL3
TR505	36217480	2SC1815-BL
TR506	36317480	2SC1815-BL
TR507	36540510	2SA1145-O
TR508	36540510	2SA1145-O
TR509	36540510	2SA1145-O
TR510	36540510	2SA1145-O
TR515	36334810	2SC2705-O
TR516	36334810	2SC2705-O
or		
TR507	36540520	2SA1145-Y
TR508	36540520	2SA1145-Y
TR509	36540520	2SA1145-Y
TR510	36540520	2SA1145-Y
TR515	36334820	2SC2705-Y
TR516	36334820	2SC2705-Y
TR511	36753140	2SC982-TM
TR512	36753140	2SC982-TM
TR513	36317480	2SC1815-BL
TR514	36317480	2SC1815-BL
TR517	36339512	2SC2824-O
TR518	36339512	2SC2824-O
TR519	36542252	2SA1184-O
TR520	36542252	2SA1184-O
TR521	36845859	2SD718-O
TR522	36845859	2SD718-O
TR523	36625360	2SB688-O
TR524	36625360	2SB688-O
or		
TR517	36339522	2SC2824-Y
TR518	36339522	2SC2824-Y
TR519	36542262	2SA1184-Y
TR520	36542262	2SA1184-Y
TR521	36845836	2SD718-R
TR522	36845836	2SD718-R

Symbol No.	Part No.	Description
TR523	36625336	2SB688-R
TR524	36625336	2SB688-R
TR601	3653404A	2SA1015-Y
or		
TR601	36524060	2SA1015-GR
TR602	36317480	2SC1815-BL
TR603	36317480	2SC1815-BL
TR604	36317480	2SC1815-BL
TR701	36317480	2SC1815-BL
TR702	36317480	2SC1815-BL
TR703	36317480	2SC1815-BL
TR704	36317480	2SC1815-BL
D001	22115564	S2V10-X
D002	22115564	S2V10-X
D003	22115564	S2V10-X
D004	22115564	2SV10-X
D005	22115564	S2V10-X
D006	22115564	S2V10-X
D007	22115564	S2V10-X
D008	22115564	2SV10-X
D009	3797380	1S5277B
D010	3798380	1S5277B
D600	22116532	GL2PR1
D601	22115415	1K426A
D602	22115415	1K426A
D603	37978380	1S5277B
D701	37246725	1S1555V-TP-3
D702	37246725	1S1555V-TP-3
D703	37246725	1S1555V-TP-3
D704	37246725	1S1555V-TP-3
D705	27246725	1S1555V-TP-3
D706	37246725	1S1555V-TP-3
D707	22115632	GL2PR1
D708	22115632	GL2PR1
D709	22115563	RD13E-B3
<b>CAPACITORS</b>		
Tolerance: D: $\pm 0.5PF$ , J: $\pm 5\%$ , K: $\pm 10\%$ , M: $\pm 20\%$ , P: $+100$ to $-0\%$ , Z: $+80$ to $-20\%$ , G: $\pm 20\%$ (N): Nonpolarity type		
C001	22440324	Electrolytic 6800 mfd/45WV, P
C002	22440324	Electrolytic 6800 mfd/45WV, P
C003	22440324	Electrolytic 6800 mfd/45WV, P
C004	22440324	Electrolytic 6800 mfd/45WV, P
C005	22342103	Ceramic 0.01 mfd, Z
C006	22342103	Ceramic 0.01 mfd, Z



Symbol No.	Part No.	Description	Symbol No.	Part No.	Description
C007	22342103	Ceramic 0.01 mfd, Z	R511	22750532	Metal Oxide 3.9K ohm ¼W, G
C008	22342103	Ceramic 0.01 mfd, Z	R512	22750532	Metal Oxide 3.9K ohm ¼W, G
C009	22340154	Ceramic 0.01 mfd, 400V, P	R513	22543104	100K ohm
C501	22361221	Ceramic 220 pF, K	R514	22543104	100K ohm
C502	22361221	Ceramic 220 pF, K	R515	22543104	100K ohm
C503	22403080	Electrolytic 4.7 mfd/35WV(N)	R416	22543104	100K ohm
C504	22403080	Electrolytic 4.7 mfd/35WV(N)	R517	22543123	12K ohm
C505	22447220	Electrolytic 22 mfd/35WV, P	R518	22543123	12K ohm
C506	22407220	Electrolytic 22mfd/35 WV, P	R519	22543222	2.2K ohm
C511	22403082	Electrolytic 100 mfd/16WV(N)	R520	22543222	2.2K ohm
C512	22403082	Electrolytic 100 mfd/16WV(N)	R521	22500233	Fusible 100 ohm, ¼W, J
C513	22361390	Ceramic 39 pF, J	R522	22500233	Fusible 100 ohm, ¼W, J
C514	22361390	Ceramic 39 pF, J	R523	22500233	Fusible 100 ohm, ¼W, J
C515	22361390	Ceramic 39 pF, J	R524	22500233	Fusible 100 ohm, ¼W, J
C516	22361390	Ceramic 39 pF, J	R524	22500233	Fusible 100 ohm, ¼W, J
C517	22342473	Ceramic 0.047 mfd, Z	R525	22500233	Fusible 100 ohm, ¼W, J
C518	22342473	Ceramic 0.047 mfd, Z	R526	22500233	Fusible 100 ohm, ¼W, J
C521	22361101	Ceramic 100 pF, K	R527	22543103	10K ohm
C522	22361101	Ceramic 100 pF, K	R528	22543103	10K ohm
C525	22342473	Ceramic 0.047 mfd, Z	R529	22543822	8.2K ohm
C526	22342473	Ceramic 0.047 mfd, Z	R530	22543822	8.2K ohm
C527	22361109	Ceramic 1 pF, D	R531	22500233	Fusible 100 ohm, ¼W, J
C528	22361109	Ceramic 1 pF, D	R532	22500233	Fusible 100 ohm, ¼W, J
C601	22403082	Electrolytic 100 mfd/16WV(N)	R533	22500233	Fusible 100 ohm, ¼W, J
C602	22403082	Electrolytic 100 mfd/16WV(N)	R534	22500233	Fusible 100 ohm, ¼W, J
C603	22443471	Electrolytic 470 mfd/10WV, P	R535	22470538	Metal Oxide 56K ohm, ¼W, G
C604	22440351	Electrolytic 10 mfd/50WV, P	R536	22570538	Metal Oxide 56K ohm, ¼W, G
C701	22342223	Ceramic 0.022 mfd, Z	R537	22573100	Metal Oxide 10 ohm, 2W, J
C702	22342223	Ceramic 0.022 mfd, Z	R538	22573100	Metal Oxide 10 ohm, 2W, J
C703	22448339	Electrolytic 3.3 mfd/50WV, P	R539	22571569	Metal Oxide 5.6 ohm, 1W, J
C704	22448339	Electrolytic 3.3 mfd/50WV, P	R540	22571569	Metal Oxide 5.6 ohm, 1W, J
C709	22448339	Electrolytic 3.3 mfd/50WV, P	R541	22573151	Metal Oxide 150 ohm, 2W, J
			R542	22573151	Metal Oxide 150 ohm, 2W, J
			R601	22543332	3.3K ohm
			R602	22543332	3.3K ohm,
			R603	22543104	100K ohm
			R604	22543560	56 ohm
			R605	22543101	100 ohm
			R611	22573821	Metal Oxide 820 ohm, 2W, J
			R621	22571472	Metal Oxide 4.7K ohm, 1W, J
			R701	22543153	15K ohm
			R702	22543153	15K ohm
			R703	22543124	120K ohm
			R704	22543124	120K ohm
			R705	22543393	39K ohm
			R706	22543393	39K ohm
			R707	22543222	2.2K ohm
			R708	22543222	2.2K ohm
			R709	22543122	1.2K ohm
			R710	22543122	1.2K ohm
			R711	22543393	39K ohm
			R712	22543393	39K ohm
			R713	22543393	39K ohm
<b>RESISTORS</b>					
All fixed resistors are 1/8W, ±5%, carbon resistor unless otherwise noted.					
Tolerance: G: ±2%, J: ±5%, K: ±10%					
R001	22573472	Metal Oxide 4.7K ohm, 2W, J			
R002	22573472	Metal Oxide 4.7K ohm, 2W, J			
R501	22543474	470K ohm			
R502	22543474	470K ohm			
R503	22543272	2.7K ohm			
R504	22543272	2.7K ohm			
R505	22543563	56K ohm			
R506	22543563	56K ohm			
R507	22543332	3.3K ohm			
R508	22543332	3.3K ohm			
R509	22543332	1.3K ohm			
R510	22543332	3.3K ohm			



Symbol No.	Part No.	Description
R714	22543393	39K ohm
R715	22543331	330 ohm
R716	22543331	330 ohm
R717	22543122	1.2K ohm
R718	22543122	1.2K ohm
R719	22543220	22 ohm
R720	22543220	22 ohm
SVR501	22658471	Semi-Fixed 5K ohm
SVR502	22658471	Semi-Fixed 5K ohm
SVR701	22658454	Semi-Fixed 10K ohm
SVR702	22658454	Semi-Fixed 10K ohm
<b>MISCELLANEOUS</b>		
L501	22211220	Choke Coil, AF
L502	22211228	Choke Coil, AF
S1	22140624	Push Switch (Power)
S2	22140640	Push Switch (Speaker Selector)
J1, 2	22163765	US2P Jack
J3, 4	22161517	4P Terminal
J5, 6	22161517	4P Terminal
J7	22163719	Jack 6.5φ
F001 ~ 004	22144263	Fuse 3.15A S
	22165047	Fuse Holding Terminal
PT1, PT2	22223542	Power Transformer (Europe)
	22223554	Power Transformer (UK)
P1-1	22176550	Power Cord (Europe)
P1-2	22177081	Power Cord (UK)
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## EXPLODED VIEW PARTS

Symbol No.	Part No.	Description
301	20015820	Chassis
302	20735705	Bracket
303	20735697	Power Transformer Bracket
304	20848603	Cabinet
305	20711680	Panel Assembly
306	22193225	P.C. Board, Indicator
307	20748675	Push Button
308	20874676	Push Button
309	22776666	Push Spring
310	22756528	Cushion
311	22832826	Bottom Cabinet
312	20842649	Foot
313	20015836	Back Chassis
314	22754791	Cord Clamper
315	22184183	Cord Clamper
316	22193226	LED P.C. Board
317	22993614	Band
318	22755516	Clamper Lug
319	22748840	Radiator
320	22748858	Shield Plate
321	22756983	Cushion
322	20747631	P.C. Board Holder
324	22193259	P.C. Board, Switch
325	20746920	Transistor Holder
326	22193217	AF P.C. Board (Left)
327	22193218	AF P.C. Board (Right)
328	22193258	P.C. Board, Switch
329	22193160	P.C. Board, Headphone
330	20754825	Earth Joint
<b>SCREWS &amp; NUTS</b>		
N1	70433008	Bind Head 3.0 x 8 mm
N2	22701757	Bind Head 3.0 x 6 mm
N3	22701716	Bind Head 3.0 x 14 mm
N4	20795955	Bind Head 3.0 x 6 mm with SW
N6	72633066	Bind Head Tapping 3.0 x 6 mm
N7	72633008	Bind Head Tapping 3.0 x 8 mm
N10	22701724	Bind Head Tapping 3.0 x 10 mm
N11	20795992	Pan Head 3.0 x 8 mm with W
N12	70443006	Flat Head 3.0 x 6 mm
N13	73653000	Nut 3.0φ
N19	22701790	Bind Head Tapping 4.0 x 6 mm
N22	20795908	Pan Head Tapping 3.0 x 8 mm with W
<b>ACCESSORIES</b>		
	22953955	Owner's Manual
	22951862	Warranty Card